

If the significance of these Amphibian characters is further found, as I urge, in a sequence of affinity between the Sauropterygia, Nothosauria, and Anomodontia, we should be justified in anticipating that there might be a community of plan in the shoulder girdle of those groups which would enable homologous elements to be recognised. Until such comparisons fail, they cannot be disregarded.

The view which I have discussed in justification of that offered to the Royal Society in 1892 may be summarised in the statement that the Anomodont is a type in which the precoracoid is ossified; that in the Nothosaur the precoracoid has ceased to be ossified, but is represented by cartilage; while in the Plesiosaur the precoracoid cartilage appears to be lost. But with this change there is no change of plan in the clavicular arch, other than results from the different habits of the several orders of animals and the forms of the girdle bones with which the arch is associated.

XIII. "Researches on the Structure, Organisation, and Classification of the Fossil Reptilia. Part VIII. On further Evidences of *Deuterosaurus* and *Rhopalodon* from the Permian Rocks of Russia." By H. G. SEELEY, F.R.S. Received June 10, 1893.

(Abstract.)

The author endeavours to separate the Labyrinthodont remains, distinguished by having teeth ankylosed to the jaw, from such as belong to animals having a Theriodont type of dentition. The genera founded upon cranial fragments which show the Theriodont type are *Deuterosaurus*, *Rhopalodon*, and *Dinosaurus*. The skull in *Deuterosaurus* is described from new materials, which make known the structure of the palate and other cranial structures. The palate is of Plesiosaurian type. The back of the skull is a vertical plate, and the brain cavity rises in a long vertical tubular mass to the parietal foramen. The quadrate bones descend below the foramen magnum in a way that is best compared with Plesiosaurs.

The articular end of the lower jaw is identified among bones figured by von Meyer.

The skull of *Rhopalodon* is nearly complete, and has a general resemblance to the skull of the South African Dicynodont *Ptychognathus*. The orbit is defended with a sclerotic circle of bones. Whereas in *Deuterosaurus* there is only one molar tooth, in *Rhopalodon* there are apparently eight molar teeth, which have the posterior edge finely serrated.

The vertebræ are known from isolated and connected specimens which indicate a larger number than usual of rib-bearing presacral

vertebræ, which appear to be not fewer than nineteen, and may have numbered twenty-six. The sacral vertebræ are deeply cupped, and the sacral ribs are developed as in *Nothosaurus* and *Pareiasaurus*. The sacral ribs form part of the articular face of the first sacral vertebra. The pelvis is imperfectly known; the ilium is not so extended as in *Dicynodonts*, and conforms to the type of *Phocosaurus*, which is regarded as *Theriodont*. The pubis and ischium are united together on the *Dicynodont* plan, but are only moderately developed.

The scapular arch is completely known, and is formed of scapula, coracoid, and pre-coracoid as in *Dicynodon* and *Pareiasaurus*. The humerus and bones of the fore limb were relatively short, and only fragments have been preserved which appear to be referable to ulna and radius.

The hind limb is known from several examples of the femur, which resembles that of *Pareiasaurus* in the proximal end, but at the distal end is more like the type described as *Saurodesmus*.

The tibia is known from its proximal and distal ends; it has a general resemblance to that of *Pareiasaurus*, but is more slender. These types are regarded as constituting a distinct group, named *Deuterosauria*, which is in many respects intermediate between the *Placodontia* and *Theriodontia*, but in skull structure appears also to approach *Nothosaurs* and *Plesiosaurs*.

XIV. "The Menstruation of *Semnopithecus entellus*." By
WALTER HEAPE, M.A., Balfour Student at the University
of Cambridge. Communicated by Professor M. FOSTER
Sec. R.S. Received May 16, 1893.

(Abstract.)

The specimens used in the following investigation were collected in Calcutta in 1891.

The phenomena attending menstruation are grouped into four periods, and these are subdivided into eight stages:

A. Period of rest. Stage I. The resting stage.

B. Period of growth. Stage II. The growth of stroma. Stage III.
The growth of vessels.

C. Period of degeneration. Stage IV. The breaking down of vessels.
Stage V. The formation of lacunæ. Stage VI. The rupture
of lacunæ. Stage VII. The formation of the menstrual clot.

D. Period of recuperation. Stage VIII. The recuperation stage.

The body of the uterus consists of an internal mucosa and external muscle layers. The mucosa is composed of uterine and glandular epithelium, blood vessels, a few radial muscles, and stroma. The